

PROFESSIONAL MIXER AMPLIFIERS MA1000S MA1000



MA100 MA100S MIXER AMPLIFIERS

H/H Electronic of Cambridge are known in the professional recording studio industry as manufacturers of the very highest quality solid state power amplifiers. These amplifiers are used as a monitoring standard in recording studios throughout the world and as a laboratory standard in institutes of technology.

The **MA100 & MA100S** multi channel mixer-amplifiers have been successfully completed after an extensive design and development programme. Our objective was to achieve a sound quality which to date surpasses all commercially known P.A. amplifiers. This powerful dynamic sound is the direct result of our research into original circuitry and state of the art technology.

Advanced Design Features. The first company in Europe to use the most advanced integrated Circuits in the driver stages and power stage of the amplifier. Integrated circuits are used extensively in the computer manufacturing industry and in the aerospace industry. They are ultra reliable encapsulated devices, each one containing the equivalent of many transistors and other discrete components. The MA100 & MA100S have the equivalent of nearly one hundred transistors throughout their circuitry. This combines very high performance, great power capability and reliability with compact circuit design. Another important feature is the absence of cross-over distortion found in many Class B amplifiers. Unique tonal circuitry enabling an immense arrangement of tonal effects to be produced. Slim-line compact unit of great mechanical strength covered in black 'Heavy Bison' grained ABS. End panels with carrying handles are injected moulded ABS and detachable by removing two chromed heavy knurled screws. ABS is the new plastic substitute for steel used by the military for manpack transmitter/receiver combat equipment, and for covering other equipment where rough handling is to be expected.

MA100 MA100S GENERAL SPECIFICATION

CONTROLS. Treble and Bass, Lift and Cut controls with a volume control on each channel. Master Presence and Master Volume control. Push button switches for the Hammond Reverberation unit on each channel with Master Reverb control (MA100 only).
Footswitch for Reverb supplied as an extra.

POWER CAPABILITY

120 Watts rms. undistorted output.

FIVE CHANNELS with a total of ten High Impedance inputs, two per channel.

FRONT PANEL. Mains On/Off switch illuminated type incorporated with electro-luminescent front panel effect hi-lighting all controls.

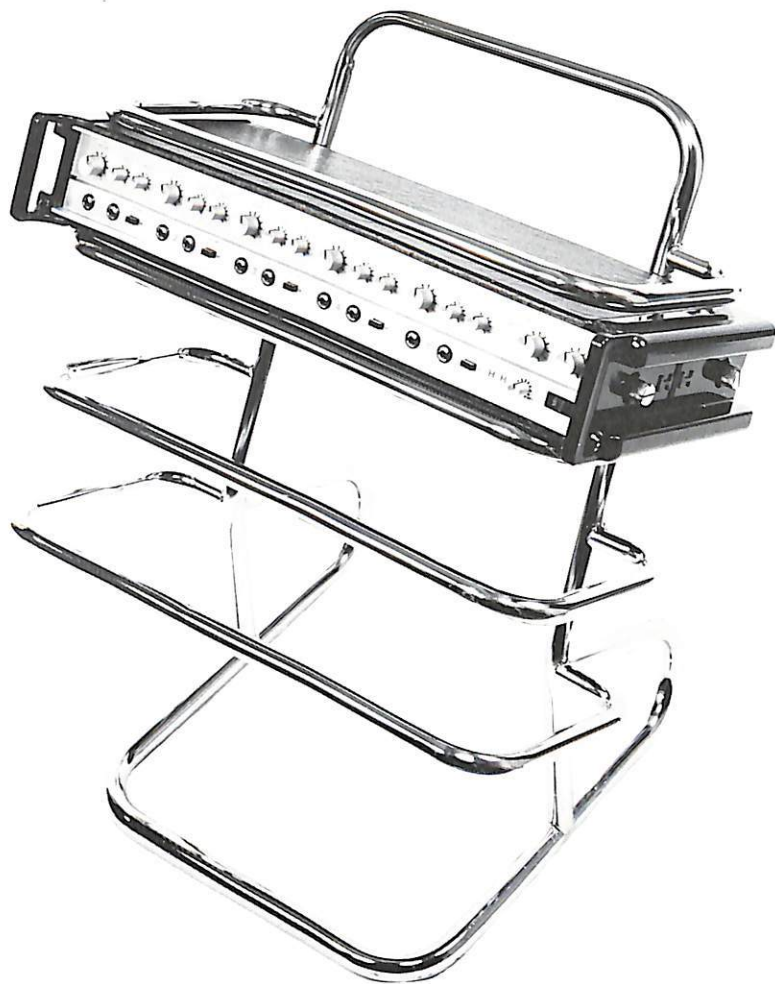
REAR PANEL OUTPUT SOCKETS. Two Speaker Outputs on Jack sockets 1 & 2 in parallel. One output to Slave socket and One Echo Send socket.

REAR PANEL INPUT SOCKETS. Auxillary input socket for mixer amplifier linking, (See engineering specification details on last page). One Echo Return socket. Reverb footswitch socket.

REAR PANEL. Voltage tap plate for 115, 210, 220, 230, 240 V. A.C. Mains 50/60Hz. One A.C. Fuse 2.5 Amp 20mm. Slow-blow type. Bulgin 3 Pin mains plug with line socket supplied.

DIMENSIONS 26 3/8 x 4 1/2 x 11 1/2 length, height & depth 670 x 108 x 292 mm.

WEIGHT. 11Kg. Approx.

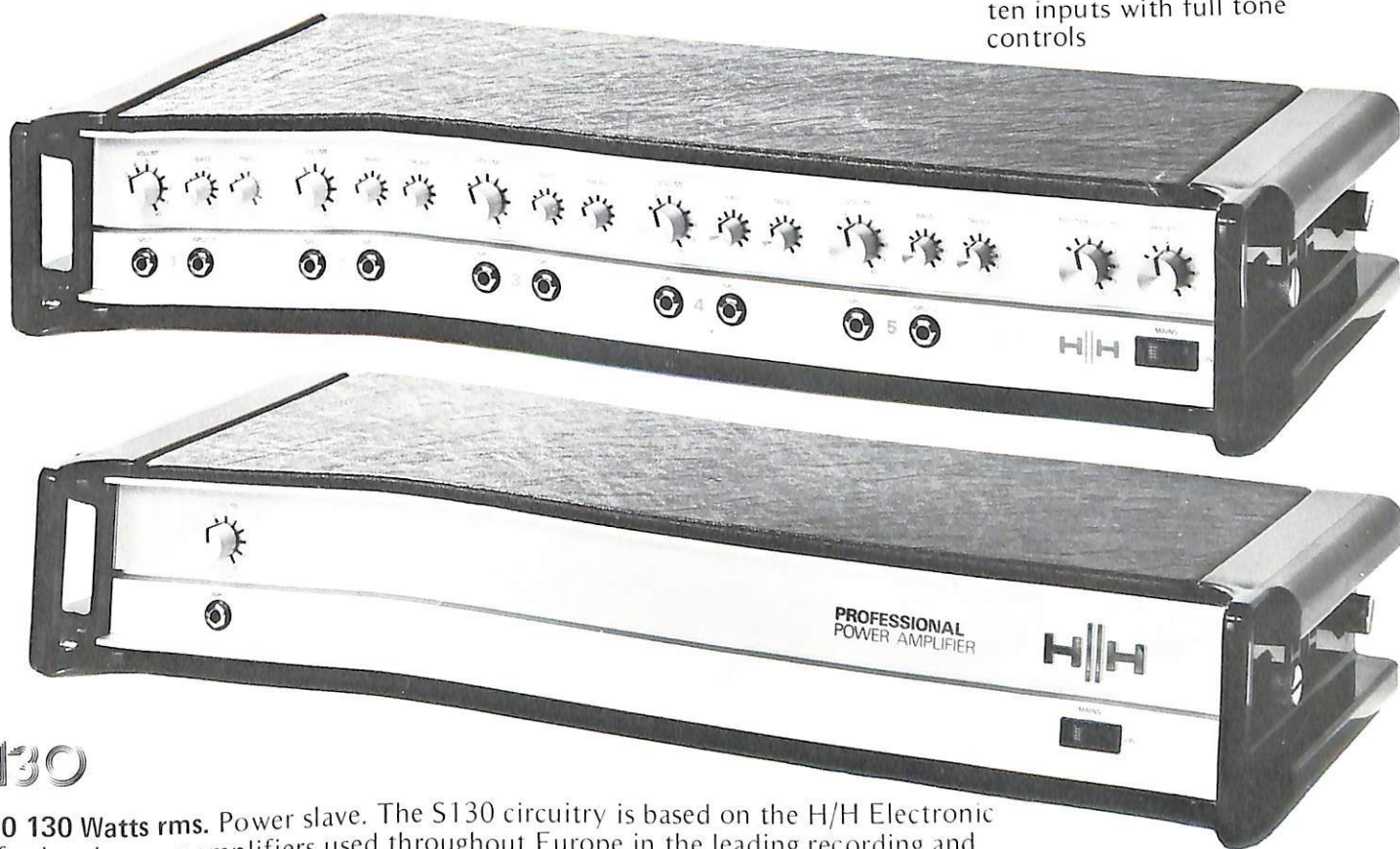


HH CONSOLE

The H/H Console has been designed for ergonomic purposes. Strongly constructed in Chromed Steel tubing it can hold up to four mixer amplifier and slave amplifier combinations connected up into a 500 Watt P.A. power set-up displayed compactly on stage. Also handy when utilised for carrying amplifiers from stage to transport. Console shown with MA100 130 Watts rms. Mixer amplifier with five channels, ten inputs, full tone controls and reverb.

MA100S

MA 100S 120 Watts rms. Mixer amplifier, five channels ten inputs with full tone controls



S130

S130 130 Watts rms. Power slave. The S130 circuitry is based on the H/H Electronic professional power amplifiers used throughout Europe in the leading recording and broadcasting studios. This amplifier is unsurpassed in performance quality. Total Harmonic Distortion less than 0.05% at 100 watts rms. at 1KHz. <0.2% at 100 watts, 20Hz to 20KHz. Noise. Better than -100dB. Response at 100 watts, ref. 1KHz, within -0.3dB 20Hz-20KHz.

MA100S MA100S

ENGINEERING SPECIFICATIONS

INPUTS. FIVE identical channels. Each channel comprising:—

Input 1. 40mV into 68K

Input 2. 40mV into 68K

Tone controls set flat into 7.5 ohms resistive load

Advanced virtual earth mix on channel input

pairs. Isolation between input 1. and input

2. on each channel 60dB.

Volume control

Bass control +17dB, -10dB @ 30Hz.

Treble control +18dB, -26dB, @ 10KHz.

MA 100 only

Push button independent channel reverb switch.

MASTER VOLUME. Continuously variable control of complete mix, feeding to power amplifier stage.

MASTER PRESENCE. Continuously variable lift. Max. lift+12dB centre frequency 2KHz.

MASTER REVERB. Control of amount of reverberation added to signal, in conjunction with individual channel reverb push buttons. MA 100 only.

AUXILLARY INPUT. Input sensitivity 500mV Input impedance 1K.

Connecting the slave output socket on the rear panel of one MA 100 amplifier to the auxillary input socket on the rear panel of a second MA 100 amplifier enables 10 channel operation. The slave output can also be used for driving a further power amplifier (slave), thus when linking amplifier channels together as described above the slave output on the second MA 100 can be utilised either for further channel linking to a third amplifier or for driving a power stage.

SLAVE OUTPUT. Output socket from mixer stages Output level 500mV. Source impedance 1K.

ECHO SEND. Output to external echo or effects unit. Output level 500mV max. Source impedance 50 ohms.

ECHO RETURN. Return from external effects unit. Max. input level 500mV input impedance 100K.

POWER OUTPUT. 100 Watts into 7.5 ohms. 120 Watts continuous power (rms) into 4 ohms non inductive load. Peak output power 180 Watts.

POWER FREQUENCY RESPONSE. Power stage (auxillary input) ± 0.5 dB 20Hz to 15KHz @ 100 Watts into 7.5 ohms non inductive load

DISTORTION. Total harmonic distortion. Mixer and power amplifier. Any input. Less than 0.2% @ 1 KHz at 100 Watts. Total harmonic distortion, mixer stages. Below the limits of measurement.

NOISE. Master volume set (0) -85dB. Master volume maximum, any one channel volume set maximum. Tone controls set (0) -70dB.

PROTECTION. Proof against short circuit and open circuit operation.

MAINS POWER. Voltage selector change at 240, 230, 220, 210, 115V AC. 50/60Hz. Power requirements 20VA at quiescent. 220VA at full power.



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